

FACT SHEET AND STATEMENT OF BASIS
GREAT SALT LAKE MINERALS CORPORATION
UPDES PERMIT NO. UT0000647

**DISCHARGE PERMIT AND STORM WATER PERMIT FOR MINOR INDUSTRIAL
FACILITY**

FACILITY CONTACT:

Responsible Official: Dr. Corey Milne
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Ogden, Utah 84404
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DESCRIPTION OF FACILITY:

Great Salt Lake Minerals Corporation (GSL Minerals) removes water from the Great Salt Lake, and by the process of evaporation, concentrates and removes salt, potash, and magnesium chloride. More salt is produced than any other product, but the potash and magnesium chloride are many times more valuable per ton than salt. In fact, the Company has a large amount of salt left in the ponds after harvesting which must, by contract with the State, be returned to the Great Salt Lake (GSL). The salt and potash are cleaned by washing with fresh water from the Willard Bay Reservoir. The potash particles are further processed into larger particles using steam. A wet scrubber is used to reduce the dust that is formed in the manufacturing process.

DESCRIPTION OF DISCHARGE:

Discharge to the GSL is located at an approximate latitude of 41° 16' 09" N and longitude 112° 14' 39"W and will be known as Outfall 001, with STORET #496281. A number of other discharges are occurring to the GSL through the evaporation ponds. Fresh water is pumped into these ponds from the Bear River Bay to absorb the excess brines which were not needed by GSL Minerals. These discharges need no permit limits because they are returned to the GSL without ever having entered the processing phase of the operation.

RECEIVING WATER CLASSIFICATION:

Discharge is to the GSL through Outfall 001. The GSL is classified as Class 5, which means it is protected for primary and secondary contact recreation, aquatic wildlife, and mineral extraction.

BASIS FOR EFFLUENT LIMITS:

Regulations contained in *40 CFR 436 Subpart L* (Mineral, Mining and Processing Point Source Category - Subpart L - Salines from Brine lake Subcategory) are applicable to discharges from this facility. This directs that there should be no discharge of process waste water pollutants into navigable waters, and that this shall be applied on a net basis if the source of the permittees water supply is the same body of water into which the discharge is made. The many discharges from various evaporation ponds are not covered under this permit because on a net basis, no discharge is

occurring as this water is not interacting with the processing facility and no other constituents are added to these waters.

The pH limitation is based upon Utah's Secondary Treatment Standards as defined in *R317-1-3.2*.

This facility has open channels of process water that run through portions of facility grounds where truck maintenance, and other activities, increase the potential for oil and grease contamination through the final discharge. Therefore, based on Best Professional Judgment, the permit will require oil and grease to be monitored on a monthly basis at Outfall 001. Oil and Grease concentrations will be limited to 10 mg/L.

No sanitary waste will be discharged through Outfall 001. Therefore no fecal or total coliform limits will be necessary.

Limits on metals will not be required based on samples of influent and effluent concentration monitoring from 1991 through 2003. A possible reason that metals concentrations do not increase in the effluent is that when the various salts precipitate out, the metals adhere to these salts and also precipitate out. Therefore, since metals have been lower in concentration in the effluent than in the influent, no limits for metals will be included in the permit.

WHOLE EFFLUENT TOXICITY (WET) TESTING REQUIREMENTS:

Since no process waters are discharged, the likelihood for toxics to be discharged is very small. Furthermore, because of the high salinity of the effluent, WET testing would not be successful at Outfall 001. Therefore, the permit will not require WET testing, nor will it contain WET limits.

PRETREATMENT REQUIREMENTS:

It is not contemplated that these discharges or any byproducts of these discharges will be connected to the sanitary sewer, therefore, no pretreatment requirements are necessary. Any wastewater connected to a sanitary sewer is subject to Federal, State and local pretreatment regulations promulgated in *40 CFR Section 403*, and State requirements found in *UAC R317-8-8*. Also the permittee would be subject to any specific local pretreatment limitations developed by the wastewater treatment plant accepting the waste.

STORM WATER REQUIREMENTS:

Because this is an industrial facility that routinely performs activities requiring a permit for storm water discharge, storm water permit coverage requirements were included in this permit. GSL Minerals is currently covered under the UPDES Multi Sector General Permit for Industrial Activities Group IV, Sector C. Permit coverage for storm water will revert to the requirements contained in this renewal permit.

SUMMARY OF LIMITATIONS:

Parameter	30-Day Average	7-Day Average	Daily Min	Daily Max
pH, S.U.	NA	NA	6.5	9.0
Oil and Grease, mg/L	NA	NA	NA	10

SELF MONITORING AND REPORTING REQUIREMENTS:

Parameter	Sampling Frequency	Sample Type	Units
pH	Monthly	Immediate	S.U.
Oil and Grease	Monthly	Grab	mg/L
Flow	Monthly	Measured	MGD

SIGNIFICANT PERMIT CHANGES:

None.

PERMIT DURATION:

It is recommended that this permit be effective for a duration of five (5) years.

Drafted by Lonnie Shull
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Utah Division of Water Quality
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